

Remarks

Claims 1-21 are pending in the application. Claims 1-21 are rejected. All rejections are respectfully traversed.

Claims 1-9, 11-14 and 17-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pirim, U.S. Patent No. 7,136,842 (Pirim), in view of Stauffer and Grimson, "Learning Patterns of Activity Using Real Time Tracking" (Stauffer), and further in view of Lee, Romano and Stein, "Monitoring Activities from Multiple Video Streams: Establishing a Common Coordinate Frame" (Lee).

MPEP 2143.01 III states, "The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination." *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990). Furthermore, MPEP 2143.01 V states, "If proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification." *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984). Applicant cannot find any suggestion, either explicit or implicit, that combining the teachings of Pirim, Stauffer and Lee would be desirable. In fact, each of the prior art methods cited by the Examiner operate in distinctly different and incompatible ways.

Pirim describes his invention as a method for "adjusting a signal" (Abstract) and "for adapting the detection sensitivity of a parameter carried by a signal"

(column 1, lines 20-21). At column 1, lines 30-39, Pirim states that his method ultimately generates “output values” that form “a feedback R available on a bus.” The Examiner attempts to modify the method of Pirim by including the co-occurrence matrices of Stauffer (used for classifying prototypes, i.e., object models) and the time offsets as disclosed by Lee (used for calibration of multiple cameras), but in doing so, disregards the stated purpose of Pirim, namely, adjusting parameters of signals. Stauffer and Lee operate on higher level models of objects while Pirim is clearly only concerned with data signals and adaptation of parameters in a computer vision system (see column 1, lines 18-19). The modification proposed by the Examiner renders Pirim unsatisfactory for its intended purpose, and therefore, there is no suggestion or motivation to make the proposed modification to Pirim.

In addition, MPEP 2143.01 VI states, “If the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious.” *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959). It is clear from the above discussion that the Examiner’s proposed combination of Pirim, Stauffer and Lee would significantly change the principle of operation of Pirim. Pirim does not teach classification of prototypes as described in Stauffer and, therefore, would not be able to use the co-occurrence matrices of Stauffer. In addition, the time offsets of Lee are used to calibrate a system of cameras and would not function in a method according to Pirim as modified by Stauffer in the way

the Examiner proposes. The method of Pirim aligns data signals according to time, and has nothing to do with the alignment of cameras tracking objects.

Finally, and most importantly, the combination of Pirim, Stauffer and Lee fails to teach each and every limitation of the claimed invention, as presented in independent claims 1 and 19.

The values DP_{ijt} and AI_{ijt} as disclosed by Pirim represents a adaptable parameters and are not labels “according to a particular sensor that detected [an] event and time of the event,” as claimed. Nowhere are these values labeled according to a particular sensor, nor are they labeled with a time of detection.

As Pirim fails to teach the labeling as claimed, Pirim cannot teach summing the events for each sensor into a corresponding histogram time interval bin associated with the sensor, as claimed. Again, Pirim does not label according to which sensor detected an event and therefore cannot sum events into bins associated with a particular sensor.

Lastly, the Examiner attempts to use Stauffer and Lee to modify the method of Pirim by including the co-occurrence matrices of Stauffer and the time offsets of Lee. However, the co-occurrence matrices of Stauffer clearly do not teach co-occurrence matrices from the histograms according

to $C_{i,j,\delta} = \sum_{t=0}^T H_{i,t} H_{j,t+\delta}$, where i and j represent each possible pair of sensors, as claimed. The indices i and j in Stauffer represent prototypes, not sensors, see page 753, section 7.2: “The multisets of prototypes are used to estimate a

co-occurrence matrix, C where c_{ij} is the estimated probability that a sequence from the training sequences will contain an input represented by the i th prototype and a separate input represented by the j th prototype.” Prototypes are object representations used by Stauffer in his method for classifying, and are clearly not sensors.

As the combination of Pirim, Stauffer and Lee fail to any of the claimed elements of the invention and all dependent claims depend on independent claims 1 and 19, Applicant respectfully requests that the Examiner withdraw his rejection under 35 U.S.C. 103(a).

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pirim, in view of Stauffer and Lee, and further in view of Caspi and Irani, “Alignment of Non-Overlapping Sequences” (Caspi).

Caspi fails to cure the defects of the combination of Pirim, Stauffer and Lee. Nowhere does Caspi teach labeling events according to a sensor that detects an event and the time of the detection, summing the events into bins of a histogram associated with each sensor, or generating co-occurrence matrices

according to $C_{i,j,\delta} = \sum_{t=0}^T H_{i,t} H_{j,t+\delta}$, where i and j represent each possible pair of sensors.

Applicant respectfully requests that the Examiner withdraw his rejection under 35 U.S.C. 103(a) of claim 10.

Claims 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pirim, in view of Stauffer and Lee, and further in view of Steyvers, “Multidimensional Scaling” (Steyvers).

Steyvers fails to cure the defects of the combination of Pirim, Stauffer and Lee. Nowhere does Steyvers teach labeling events according to a sensor that detects an event and the time of the detection, summing the events into bins of a histogram associated with each sensor, or generating co-occurrence

matrices according to $C_{i,j,\delta} = \sum_{t=0}^T H_{i,t} H_{j,t+\delta}$, where i and j represent each possible pair of sensors. The Examiner is reminded that the values d_{ij} and δ_{ij} as used in claims 15 and 16 are defined in the claims and the Specification as inter-sensor distances (see claims 11 and 1, and paragraph [045]) and time offsets (see claim 1 and paragraph [047]) between sensors i and j . This is not importation of limitations from the specification to the claims as the values i and j are defined in claim 1 from which claims 15 and 16 depend.

Applicant respectfully requests that the Examiner withdraw his rejection under 35 U.S.C. 103(a) of claims 15 and 16.

It is believed that this application is now in condition for allowance. A notice to this effect is respectfully requested. Should further questions arise concerning this application, the Examiner is invited to call Applicant’s attorney at the number listed below. Please charge any shortage in fees due in connection with the filing of this paper to Deposit Account 50-0749.

Respectfully submitted,
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